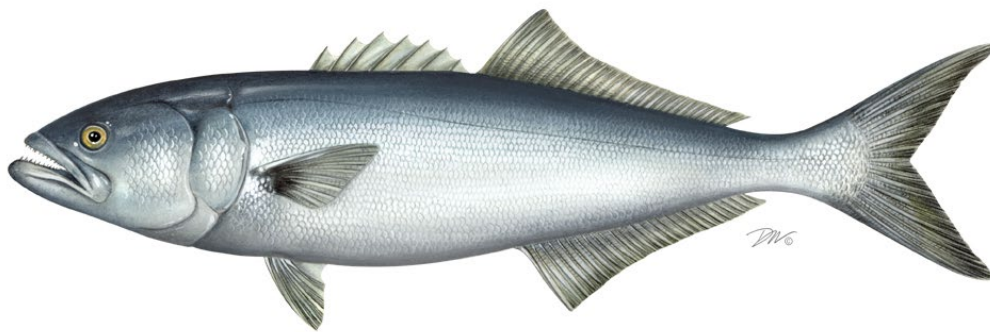


ATLANTIC STATES MARINE FISHERIES COMMISSION

REVIEW OF THE INTERSTATE FISHERY MANAGEMENT PLAN

FOR BLUEFISH
(Pomatomus saltatrix)

2021 FISHING YEAR



Prepared by the Plan Review Team

Approved August 8, 2022



Sustainable and Cooperative Management of Atlantic Coastal Fisheries

Executive Summary

Bluefish from Maine through Florida are jointly managed by the Atlantic States Marine Fisheries Commission in state waters (0-3 miles from shore) and the Mid-Atlantic Fishery Management Council in federal waters (3-200 miles from shore).

Based on the 2021 management track stock assessment bluefish are overfished, but are not experiencing overfishing relative to the updated biological reference points. The updated stock assessment incorporated data through 2019 and included calibrated estimates of recreational catch and effort from the Marine Recreational Information Program (MRIP).

2021 recreational bluefish harvest was estimated at 6.18 million fish weighing 12.46 million pounds (Tables 3 and 4). Recreational dead releases were estimated at 3.53 million fish. 2021 recreational landings exceeded the recreational harvest limit (RHL) by 4.12 million pounds 2021 commercial bluefish landings were recorded at approximately 2.38 million pounds, which falls below the quota of 2.77 million pounds (Table 2). Total harvest of 14.85 million pounds in 2021 remains near the time series low of 15.70 million pounds reached in 2018 (Table 4).

In 2021, all states implemented management programs consistent with the intent of Amendment 1 and Addendum I to the ISFMP (as updated in February 2021). Maine, South Carolina, and Georgia requested *de minimis* status for 2022. Maine, South Carolina, and Georgia all qualify for *de minimis* status because their commercial landings in 2021 were less than 0.1% of the coastwide commercial landings estimate.

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2021 REVIEW OF THE ASMFC FISHERY MANAGEMENT PLAN FOR BLUEFISH (*Pomatomus saltatrix*)

I. Status of the Fishery Management Plan

<u>Date of FMP Approval:</u>	1989
<u>Amendments:</u>	Amendment 2 (2021), Amendment 1 (1998); Addendum II (2022), Addendum I (2012)
<u>Management Unit:</u>	Migratory stocks of bluefish in U.S. state and federal waters of the western North Atlantic
<u>States with Declared Interest:</u>	Maine through Florida, excluding Pennsylvania and the District of Columbia
<u>Active Committees:</u>	ASMFC: Bluefish Management Board, Technical Committee, Advisory Panel, Plan Review Team, and Stock Assessment Subcommittee MAFMC: Bluefish Committee, Monitoring Committee, Advisory Panel, and Scientific and Statistical Committee

The Fishery Management Plan (FMP) for bluefish was adopted by the Atlantic States Marine Fisheries Commission (ASMFC or Commission) and the Mid-Atlantic Fishery Management Council (MAFMC) in October 1989. It was the first FMP developed jointly by an interstate commission and a federal fishery management council.

In 2021, bluefish was managed under Amendment 1 to the FMP approved in October 1998 and implemented in 2000. The goal of the Amendment is to conserve the bluefish resource along the Atlantic coast, specifically to:

1. Increase understanding of the stock and fishery
2. Provide highest availability of bluefish to U.S. fishermen while maintaining, within limits, traditional uses of bluefish
3. Provide for cooperation among the coastal states, the various regional marine fishery management councils, and federal agencies involved along the coast to enhance the management of bluefish throughout its range
4. Promote compatible management regulations between State and Federal jurisdictions
5. Prevent recruitment overfishing
6. Reduce the waste in both the commercial and recreational fisheries.

States and jurisdictions with a declared interest in the bluefish FMP include all ASMFC member states and jurisdictions, with the exception of Pennsylvania and the District of Columbia. Management issues are addressed jointly through the ASMFC Bluefish Management Board (Board) and the MAFMC (Council). The MAFMC's Bluefish Monitoring Committee (MC)

conducts annual plan monitoring, which is reviewed jointly by the Council's and Board's Bluefish Advisory Panels (AP), and all committee recommendations are then provided to the Board and Council for review. A working group, as constituted through the Northeast Fisheries Science Center (NEFSC) and Northeast Region Coordinating Council process, addresses stock assessment matters. The Board may implement changes to the FMP in state waters through the adaptive management process. The TC, Plan Review Team (PRT), Plan Development Team (PDT), and AP provide technical and industry advice to the Board throughout the adaptive management process.

In February 2012, the Board approved Addendum I to Amendment 1 to the Bluefish FMP. The Addendum establishes a coastwide biological monitoring program to improve the quantity and quality of information available for use in bluefish stock assessments. A summary of these findings from the most recent year are found in Section IV.

In August 2021, the Board approved Amendment 2 to the Bluefish FMP. The Amendment updated the FMP goals and objectives, initiated a rebuilding plan, established new allocations between the commercial and recreational sectors, implemented new commercial allocations to the states, revised the process for quota transfers between sectors, and revised how the management plan accounts for management uncertainty. The Amendment became effective on January 1, 2022, and thus was not in effect for the 2021 fishing year which is the subject of this FMP review.

The Board and the Council initiated the Amendment in December 2017 to consider revisions to the commercial and recreational fisheries allocations and the state-specific commercial allocations. In 2019, a management track stock assessment for bluefish indicated the stock was overfished, and the Board and Council subsequently incorporated the rebuilding plan in the Amendment.

Given the stock's overfished condition, the Amendment established a 7-year rebuilding plan to be achieved through a constant fishing mortality approach. The Amendment also revised sector allocations, increasing the recreational allocation from 83% to 86% of the acceptable biological catch and decreasing the commercial allocation from 17% to 14%. Catch data from 1981-2018 were used as the basis for sector allocations since this time series captures the cyclical nature of the fishery, while providing each sector with sufficient access to the resource considering historical usage.

The Amendment revised state-by-state commercial allocations to better reflect the current distribution of the stock and the needs of the states' commercial fisheries. The Amendment allocated a baseline quota of 0.1% to each state, and then allocated the rest of the commercial quota based on landings data from 2009 to 2018 (see Table 1). Recognizing that several states would lose quota during a time when the coastwide commercial quota was already at an historic low, the Amendment phased-in the allocation changes over 7 years in order to reduce short-term economic impacts to the affected commercial fishing industries. The Board and Council also agreed to review state allocations within 5 years of implementation.

The Amendment updated the sector transfer process to allow for quota transfers in either direction between the commercial and recreational sectors. Previously, quota could only be transferred from the recreational sector to the commercial fishery. The transfers are now capped at 10% of the acceptable biological catch for a given year.

The Amendment also revised the goals and management objectives of the FMP:

Goal 1: Conserve the bluefish resource through stakeholder engagement to maintain sustainable recreational fishing and commercial harvest.

Objective 1.1: Achieve and maintain a sustainable spawning stock biomass and rate of fishing mortality.

Objective 1.2: Promote practices that reduce release mortality within the recreational and commercial fishery.

Objective 1.3: Maintain effective coordination between the National Marine Fisheries Service, Council, and Commission and its member states by promoting compliance and to support the development and implementation of management measures.

Objective 1.4: Promote compliance and effective enforcement of regulations.

Objective 1.5: Promote science, monitoring, and data collection that support and enhance effective ecosystem-based management of the bluefish resource.

Goal 2: Provide fair and equitable access to the fishery across all user groups throughout the management unit.

Objective 2.1: Ensure the implementation of management measures provides fair and equitable access to the resource across all groups within the management unit.

Objective 2.2: Consider the economic and social needs and priorities of all groups that access the bluefish resource in the development of new management measures.

Objective 2.3: Maintain effective coordination with stakeholder groups to ensure optimization of economic and social benefits.

Finally, the Amendment modified the management uncertainty tool within the FMP to a sector-specific approach. It allows the Commission and Council to apply a buffer to either sector, in the form of a quota reduction, to account for management uncertainty during specifications. While this tool has not been used often, the modified approach allows managers to better target areas of uncertainty within one sector without reducing the quota or harvest limit in the other sector.

In June 2022, the Policy Board approved changes to the recreational fisheries management programs for summer flounder, scup, black sea bass, and bluefish. The changes include a new process for setting recreational measures (bag, size, and season limits) and modifications to the recreational accountability measures. The Policy Board adopted the new process through Addendum II to the Bluefish FMP. However, the new process will not be implemented for bluefish until the stock is declared rebuilt. Approval of this new process is part of a broader

long-term effort by both the Council and Commission to improve recreational management of these four species. The new management program aims to provide greater stability and predictability in recreational measures from year-to-year while accounting for uncertainty in recreational catch estimates. Details on the new process may be found [here](#).

2021 Annual Fishery Specifications

Commercial and recreational bluefish harvests are managed via sector-specific landings limits (i.e., a coastwide commercial fishery quota and a recreational harvest limit, or RHL). The Council's Scientific and Statistical Committee (SSC) and Bluefish MC annually review the best available information and make fishery specification recommendations to the Council and Board for the subsequent fishing year. Recommendations include commercial quota, RHL, research set-aside (RSA), and other management measures such as minimum size limits and bag limits. The Council and Board meet jointly (typically in August) to consider the SSC's and MC's fishery specification recommendations and formalize commercial and recreational catch limits, and other management measures.

Annual fishery specification recommendations are typically developed as follows: final commercial quota and RHL recommendations are derived from an annual catch limit (ACL), which the FMP defines as equal to the allowable biological catch (ABC), and is in turn equal to or less than an overfishing limit (OFL). The stock's OFL is a catch level that corresponds to the stock's maximum sustainable yield, which is determined through the most recent stock assessment. After accounting for management uncertainty, 17% of the ACL is allocated to the commercial sector and 83% to the recreational sector; these are the commercial and recreational annual catch targets (ACTs). Discard estimates are deducted from ACTs to derive commercial and recreational total allowable landings (TALs). If the recreational fishery is not projected to land its TAL, then at the discretion of the Board and Council, quota may be transferred from the recreational to the commercial sector, not to exceed a commercial quota of 10.5 million pounds (the average commercial landings during the period 1990-1997). The final commercial quota is then allocated to the states of Maine through Florida with the percentage allocations based on average commercial landings during 1981-1989. The state-specific shares are detailed in Table 2.

II. Status of the Stock

Based on the 2021 management track stock assessment conducted by NEFSC, bluefish are overfished, but were not experiencing overfishing in 2019. The updated stock assessment incorporated data through 2019. Spawning stock biomass (SSB) in 2019 was estimated to be 211 million pounds, which is 95% of the SSB threshold of 222 million pounds (Figure 1). Fishing mortality in 2019 was estimated to be 0.172, below the fishing mortality threshold (FMSY PROXY= F35%=0.181). Although fishing mortality was below the threshold in 2018 and 2019, fishing mortality exceeded the updated threshold every year from 1985 to 2017. The largest recruitment in the time series occurred in 1989 at 98 million fish, and the lowest recruitment was in 2016 at 29 million fish. Recruitment over the last 10 years has varied around the time series average of 46 million fish (NEFSC 2021).

Bluefish is currently in a 7-year rebuilding plan. The rebuilding plan uses a constant fishing mortality approach, and progress will be reviewed every other year through management track stock assessments. A research track stock assessment, which can incorporate larger revisions to the stock assessment model, is scheduled for December of 2022.

III. Status of the Fishery

From 2012-2021, recreational catch (harvest plus fish caught and released) of bluefish in U.S. waters of the Atlantic coast averaged 41.61 million fish annually (Table 3). In 2021, recreational catch was estimated at 29.75 million fish which is a 3% decrease relative to 2020. In 2021, recreational anglers harvested an estimated 6.18 million fish weighing 12.46 million pounds (5,653 metric tons). Harvest during 2018-2021 was exceptionally low compared to the ten year average of 23.52 million pounds (Table 4). The 2021 average weight of landed fish is 2.02 pounds, which is larger than the ten year average of 1.67 pounds. The majority of the recreational harvest (pounds) came from Florida (29%), New Jersey (27%), and New York (19%). In 2021, recreational dead releases (15% of released alive fish) were estimated at 3.53 million fish (Table 3). Figure 2 displays trends in recreational harvest, catch, and releases over the 1985-2021 time series.

From 1985-1999, annual commercial landings of bluefish in U.S. waters of the Atlantic coast averaged 11.31 million pounds (5,129 metric tons). After the implementation of the Amendment 1 quota system, from 2000-2020 commercial landings of bluefish have averaged 5.62 million pounds (2,551 metric tons) annually (Figure 3). In 2021, commercial landings were 2.38 million pounds (1,082 metric tons), an increase of 1% relative to 2020 landings and a 15% underage of the 2021 commercial quota (2.77 million pounds). The majority of commercial landings came from North Carolina (44%), New York (15%), Rhode Island (11%), New Jersey (10%), and Massachusetts (9%). Commercial dead discards are considered negligible.

IV. Status of Research and Monitoring

Many states, as well as the NEFSC, the Northeast Area Monitoring and Assessment Program (NEAMAP), and the Southeast Area Monitoring and Assessment Program (SEAMAP) conduct fishery-independent surveys. New Hampshire, Rhode Island, Connecticut, New York, New Jersey, Maryland, Virginia, and South Carolina (SEAMAP) provide indices of juvenile bluefish abundance for stock assessments, and Connecticut, New Jersey, Virginia (NEAMAP), and North Carolina provide indices of adult abundance. Year class strength is monitored through a number of fishery-independent surveys (NEFSC 2015). Although not included in the 2021 management track assessment, Massachusetts, Delaware, Georgia, and Florida also maintain indices of abundance from surveys that encounter bluefish.

Due to challenges brought on by the COVID-19 pandemic, New Jersey's Ocean Trawl Survey and South Carolina's spring SEAMAP-SA Coastal Trawl Survey were cancelled in 2021. Refer to Table 5 for status of monitoring efforts by state in 2021.

Commercial landings information is collected by most states from dealer or fisherman reporting programs, which is provided to the Atlantic Coastal Cooperative Statistics Program's (ACCSP) Standard Atlantic Fisheries Information System (SAFIS). Fishermen fishing in federal waters are required to report their landings to NOAA Fisheries. Recreational catch and harvest is monitored by MRIP.

Addendum I to Amendment 1 (2012) implemented a biological monitoring program to enhance age and length data used in bluefish stock assessments. Under Addendum I, states that accounted for more than 5% of total coastwide bluefish harvest (recreational and commercial combined) for the 1998-2008 period are required to collect a minimum of 100 bluefish ages (50 from January through June, 50 from July through December). Those states are Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Virginia, and North Carolina. In February 2021, the Board revised the sampling requirement threshold to any state with greater than 4% of the coastwide removals (defined as the sum of recreational and commercial landings and dead discards) for the period 2010-2019. This added Florida to the states required to collect samples. In addition, the 50 fish sample seasonal requirement was changed to a target, while maintaining the 100 fish annual sampling requirement. The [TC report from September 2020](#) outlines more details regarding state by state sampling targets for reference.

Age samples are primarily collected from fishery-dependent sources (e.g., party/charter boats, fishing tournaments, and volunteer anglers), although samples collected from fishery-independent sources are sometimes utilized as needed to fulfill this requirement. In 2021, most states were able to collect the minimum of 100 age samples (Table 5), and all states made a good effort to collect 50 age samples from both spring and fall. Massachusetts was just short of the required 100 aged samples with 104 samples collected, but one was removed because of a questionable measurement and four were unable to be aged. Florida collected 79 samples, but has not yet aged the samples. It appears that Florida's sample collection time period March-November, did not align well with when the majority of bluefish are intercepted in Florida's waters (January- April).

V. Status of Management Measures and Issues

The Board and Council recommend adjustments to the commercial quota and RHL annually using the specification setting process detailed in Amendment 1 (Section 3.1.1.6) and in Section I of this report. In 2021, the recreational fishery was allocated 83% of the ACL, and 17% was allocated to the commercial fishery. In 2021, the coastwide commercial quota was allocated to the states via state-specific percentage shares based on landings from 1981-1989 (Table 2). Both the commercial/recreational sector allocations and the states' commercial quota allocations were based on Amendment 1 in 2021. The allocations have since been updated in 2022 to reflect the outcome of Amendment 2 to the Bluefish FMP.

The 2021 ACL was 16.28 million pounds (7,385 metric tons), the commercial quota was 2.77 million pounds (1,255 metric tons) and the RHL was 8.34 million pounds (3,785 metric tons).

2021 commercial bluefish landings were recorded at approximately 2.38 million pounds, which falls below the quota. 2021 recreational landings were 12.46 million pounds, which exceeds the RHL by 4.12 million pounds. NOAA Fisheries has released their final catch accounting data for 2021 which demonstrates the sum of 2021 recreational and commercial landings and dead discards exceeds the fishery-level ACL by 5.59 million lbs. Therefore, federal accountability measures will be triggered for 2021. According to the federal regulations, the ACL overage must be deducted from the following year's ACT, or as soon as possible thereafter. Considering the timing of setting specifications, this will be taken up at the Board and Council's August 2022 meeting for possible implementation in 2023. 2021 state-specific commercial shares and landings, and initial 2022 state-specific shares are listed in Table 2.

Law Enforcement Reporting:

States are asked to report and summarize law enforcement cases that occurred the previous season in annual compliance reports. In 2021, reported law enforcement cases (e.g., the number of warnings and citations) remain low and were similar to those reported in previous years.

VI. Implementation of FMP Compliance Requirements for 2021

These states and jurisdictions are required to comply with the provisions of the Bluefish FMP: Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Delaware, Maryland, Potomac River Fisheries Commission, Virginia, North Carolina, South Carolina, Georgia, and Florida. The following are specific FMP compliance requirements for 2021:

- Each state must restrict the possession of bluefish to no more than three fish per day for recreational anglers and five fish per day for those fishing with for-hire operators, or have an ASMFC-approved equivalent conservation program.
- Each state must restrict its commercial fishery to the quota adopted under procedures specified in the FMP.
- These states are required to collect a minimum of 100 age samples per Addendum I to Amendment 1: Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Virginia, North Carolina, and Florida.
- Each state is required to implement and maintain a permit system for commercial fishermen, commercial dealers and for-hire operators who land, sell, and catch fish in state waters.
- States must submit annual compliance reports verifying that the above listed FMP requirements have been implemented. Compliance reports should also include an overview of permitting requirements for commercial and party/charter vessels and commercial dealers.

Based on the annual state compliance reports, the PRT determined all states and jurisdictions implemented a management program in 2021 consistent with the intent of the ISFMP for Bluefish (Amendments 1 and 2, and Addendum I). With the exception of Georgia, all states implemented the recreational measures of 3 fish for private anglers and 5 fish for for-hire operators. In December 2021, the Board determined that Georgia's proposal to enact a closure

during wave 2 (March-April) was conservationally equivalent to the coastwide recreational measures. While not all states were able to meet the 100 fish biological sampling requirement and complete all fishery independent monitoring, every state made a good faith effort to do so despite the challenges faced during the pandemic. Massachusetts collected just short of the required 100 samples (99 after one was removed because of a questionable measurement and four were unable to be aged). Florida, which collected 79 out of 100 required samples, had some difficulties in rolling out its program in its first year. While otoliths were collected, there was a delay in aging the samples. Florida Fish and Wildlife Conservation Commission staff indicated that there will be a greater emphasis on obtaining the samples and aging the samples in a timely manner moving forward. Refer to Table 5 for state monitoring and reporting requirements, Table 6 for fishery regulations by state in 2021, and Table 2 for commercial quota monitoring and harvest.

Maine, South Carolina, and Georgia requested *de minimis* status for 2022. Maine, South Carolina, and Georgia qualify for *de minimis* status because their commercial landings from the most recent year were less than 0.1% of the coastwide commercial landings estimate (Table 2).

VII. Plan Review Team Comments and Recommendations

- Connecticut's compliance report indicates an overage of their commercial quota in 2021. GARFO uses SAFIS data to inform catch accounting, which had a lower landings value for Connecticut than what is reported in the ACCSP Data Warehouse. As such GARFO has determined that an overage payback will not be needed moving forward.
- The PRT was concerned about the data discrepancies between the ACCSP Data Warehouse and the SAFIS data used by GARFO for catch accounting. The PRT will continue to monitor for significant discrepancies.
- Maine, South Carolina, and Georgia requested and meet the requirements for *de minimis* status for 2021.
- The PRT found that all states implemented regulations consistent with the intent of Amendment 1 and Addendum I of the Bluefish Interstate FMP.

VIII. Research Recommendations

- The PRT strongly recommends that the Board strongly encourages states to develop or expand recreational release length data collection programs, taking advantage of existing software and technology as possible. Generating reliable discard length data from recreational anglers, especially from southern states, could greatly improve the robustness of stock assessments moving forward.
- Additional research recommendations were identified during the [2015 Bluefish Benchmark Stock Assessment at the 60th SAW/SARC](#) (pg. 409).

IX. References

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X. Tables

Table 1. Revised state allocation percentages of the bluefish commercial quota based on 2009-2018 landings data with a minimum default allocation of 0.1%. Previous allocations are provided for comparison purposes.

State	Previous Allocations Under Amendment 1	Revised Allocations to be Phased in Over 7 Years
Maine	0.67%	0.11%
New Hampshire	0.41%	0.22%
Massachusetts	6.72%	10.12%
Rhode Island	6.81%	9.61%
Connecticut	1.27%	1.09%
New York	10.39%	19.76%
New Jersey	14.82%	13.85%
Delaware	1.88%	0.49%
Maryland	3.00%	1.92%
Virginia	11.88%	5.87%
North Carolina	32.06%	32.03%
South Carolina	0.04%	0.10%
Georgia	0.01%	0.10%
Florida	10.06%	4.78%

Table 2. 2021 and 2022 state-specific shares of commercial bluefish quota and 2021 harvest in weight (lbs.). Landings data source: state compliance reports. C = landings values are confidential.

State	% of Federal Quota*	2021 Initial Quota	2021 Transfers	2021 Final Quota	2021 Landings	Overages	% Quota Used	% Coastwide Total	2022 Initial Quota
ME	0.6685	18,503	-15,000	3,503	C	0	C	C	20,819
NH	0.4145	11,473	-11,000	473	C	0	C	C	13,655
MA	6.7167	185,904	50,000	235,904	223,709	0	94.8%	9.4%	254,748
RI	6.8081	188,434	126,000	314,434	254,487	0	61.4%	10.7%	254,956
CT	1.2663	35,049		35,049	37,297	2,248	106.4%	1.6%	43,885
NY	10.3851	287,438	100,000	387,438	360,091	0	92.9%	15.1%	414,693
NJ	14.8162	410,082	-150,000	260,082	237,797	0	91.4%	10.0%	519,158
DE	1.8782	51,985	-45,000	6,985	3,740	0	53.5%	0.2%	59,442
MD	3.0018	83,084	-40,000	43,084	12,228	0	28.4%	0.5%	100,698
VA	11.8795	328,800	-160,000	168,800	93,197	0	55.2%	3.9%	389,802
NC	32.0608	887,377	185,000	1,072,377	1,051,026	0	98.0%	44.1%	1,133,855
SC	0.0352	974		974	C	0	C	C	1,590
GA	0.0095	263		263	0	0	0.0%	0.0%	805
FL	10.0597	278,432	-40,000	238,432	111,292	0	46.7%	4.7%	329,137
TOTAL[^]	100.00	2,767,798		2,767,798	2,384,888		85%		3,537,096

[^] totals in table may not match listed quotas due to rounding

* State allocation percentages are associated with the 2021 fishing year. 2022 state allocations differ according to Amendment 2.

Table 3. Estimated bluefish recreational harvest (A + B1), releases (B2), dead releases (15% of B2), total catch (A+B1+B2), and total removals (Harvest + Dead Releases) in numbers of fish by marine recreational anglers, 2012 to 2022. Source: MRIP. These estimates may differ from MRIP estimates depending on query date (Data queried June 2022).

Year	Total Catch (A+B1+B2)	Harvest (A+B1)	Released (B2)	Dead Releases (15% of B2)	Total Removals (Harvest + Dead Releases)
2012	50,658,364	18,578,836	32,079,528	4,811,929	23,390,765
2013	53,494,663	19,975,050	33,519,613	5,027,942	25,002,992
2014	55,093,764	21,510,650	33,583,114	5,037,467	26,548,117
2015	42,148,963	13,725,107	28,423,856	4,263,578	17,988,685
2016	42,528,744	14,899,721	27,629,023	4,144,353	19,044,074
2017	42,163,134	13,845,808	28,317,326	4,247,599	18,093,407
2018	30,928,700	10,245,708	20,682,992	3,102,449	13,348,157
2019	38,631,936	12,137,290	26,494,646	3,974,197	16,111,487
2020	30,681,826	9,336,222	21,345,604	3,201,841	12,538,063
2021	29,749,992	6,183,778	23,566,214	3,534,932	9,718,710
Average	41,608,009	14,043,817	27,564,192	4,134,629	18,178,446

Table 4. Bluefish Commercial Landings and Recreational Harvest (A + B1) by weight (metric tons, pounds), 2012-2021. Source: ACCSP Data Warehouse (personal correspondence with Joseph Myers), 2022 state compliance reports and MRIP. Estimates may differ from source websites depending on query date (commercial data queried May 2022; recreational data queried June 2022).

Year	Commercial		Recreational (A + B1)		Total	
	MT	Pounds	MT	Pounds	MT	Pounds
2012	2,212	4,876,858	14,756	32,530,917	16,968	37,407,775
2013	1,977	4,359,166	15,603	34,398,329	17,580	38,757,603
2014	2,251	4,962,921	12,267	27,044,276	14,518	32,007,179
2015	1,917	4,226,300	13,653	30,098,649	15,569	34,324,196
2016	1,946	4,289,401	10,957	24,155,304	12,902	28,444,731
2017	1,876	4,136,503	14,548	32,071,433	16,423	36,207,159
2018	1,102	2,435,814	6,020	13,270,862	7,121	15,700,052
2019	1,357	2,996,323	7,056	15,555,889	8,413	18,546,778
2020	1,068	2,355,081	6,160	13,581,218	7,229	15,936,299
2021	1,082	2,384,888	5,653	12,462,780	6,735	14,847,668
Average	1,679	3,700,978	10,667	23,516,966	12,346	27,217,944

Table 5. Status of compliance with monitoring and reporting requirements, 2021 (Y = compliance standards met, N = compliance standards not met, NA = not applicable).

State/ Jurisdiction	Fishery-independent monitoring		Fishery-dependent monitoring		Annual Reporting Status
	Survey(s)	Status	Type(s)	Status (num. of age samples)	
ME*	NA	NA	Rec and Com harvest	NA	Y
NH	Juvenile	Y	Rec and Com harvest	NA	Y
MA	Juvenile	Y	Rec and Com harvest, Age Samples	N (Spring 54, Fall 45, 99 Total)	Y
RI	Juvenile, Adult	Y	Rec and Com harvest, Age Samples	Y (Spring 37, Fall 68, 105 Total)	Y
CT	Juvenile, Adult	Y	Rec and Com harvest, Age Samples	Y (Spring 6, Fall 220, 226 Total)	Y
NY	Juvenile	Y	Rec and Com harvest, Age Samples	Y (Spring 164, Fall 16, 180 Total)	Y
NJ	Juvenile, Adult	Y**	Rec and Com harvest, Age Samples	Y (Spring 74, Fall 129, 203 Total)	Y
DE	Juvenile, Adult	Y	Rec and Com harvest	NA	Y
MD	Juvenile	Y	Rec and Com harvest	NA	Y
PRFC	Juvenile	Y	Rec and Com harvest	NA	Y
VA	Juvenile, Adult	Y	Rec and Com harvest, Age Samples	Y (Spring 8, Fall 190, 198 Total)	Y
NC	Adult	Y	Rec and Com harvest, Age Samples	Y (Spring 150, Fall 707, 857 Total)	Y
SC*	NA	NA	Rec and Com harvest	NA	Y
GA*	NA	NA	Rec and Com harvest	NA	Y
FL	Juvenile, Adult	Y	Rec and Com harvest	N (Spring 70, Fall 9, 79 Total)	Y

*granted *de minimis* for 2021 fishing season

** New Jersey's Ocean Trawl Survey cancelled due to COVID.

Table 6. Fishery regulations by state, 2021. Minimum size are in total length (TL) except for GA and FL are in fork length (FL).

State/ Jurisdiction	Recreational			Commercial	
	Bag Limit	Season	Size Limit	Trip and Size Limit	Open Season
ME	3 fish	All year	None	No Restrictions	All year
NH	3 fish private angler; 5 fish for-hire	All year	None	No Restrictions	July 1 - Sept 30
MA	3 fish private angler; 5 fish for-hire	All year	None	5,000 lbs/day or trip (whichever is longer)	All year
RI	3 fish private angler; 5 fish for-hire	All year	None	18" min size; 1,000 lbs/bi-wk (1.1-4.30) 6,000 lbs/wk (5.1-11.15) 500 lbs/wk (11.16-12.31)	All year
CT	3 fish private angler; 5 fish for-hire	All year	None	9" min size; 1,200 lbs/trip	All year
NY	3 fish private angler; 5 fish for-hire	All year	None	9" min size; Trip Limits: 5,000 lbs (1.1-4.30); 500 lbs (5.1-5.22); 100 lbs (5.23-10.2); 280 lbs (10.3-12.31)	All Year
NJ	3 fish private angler; 5 fish for-hire	All year	None	9" min size	Closed to H&L from 1.1-6.15 and 8.8-12.31
DE	3 fish private angler; 5 fish for-hire	All year	None	No Restrictions	All year
MD	3 fish private angler; 5 fish for-hire	All year	8" min size	8" min size	All year
PRFC	3 fish private angler; 5 fish for-hire	All year	8" min size	Trip limits after 80% of VA-MD quota is landed	All year
VA	3 fish private angler; 5 fish for-hire	All year	None	No Restrictions	All year

NC	3 fish private angler; 5 fish for-hire	All year	None	Trip Limits: 800 lbs (4.16-8.24); 500 lbs (8.25-11.2); 300 lbs (8.25-11.2)); 50 lbs (11.24-12.31)	All year
SC	3 fish private angler; 5 fish for-hire	All year	None	No directed fishery	All year
GA	15 fish	Closure 3/1-4/30	12" min size	12" min size; 15 fish	All Year
FL	3 fish	All year	12" min size	12" min size; 7,500 lbs/day	All year

XI. Figures

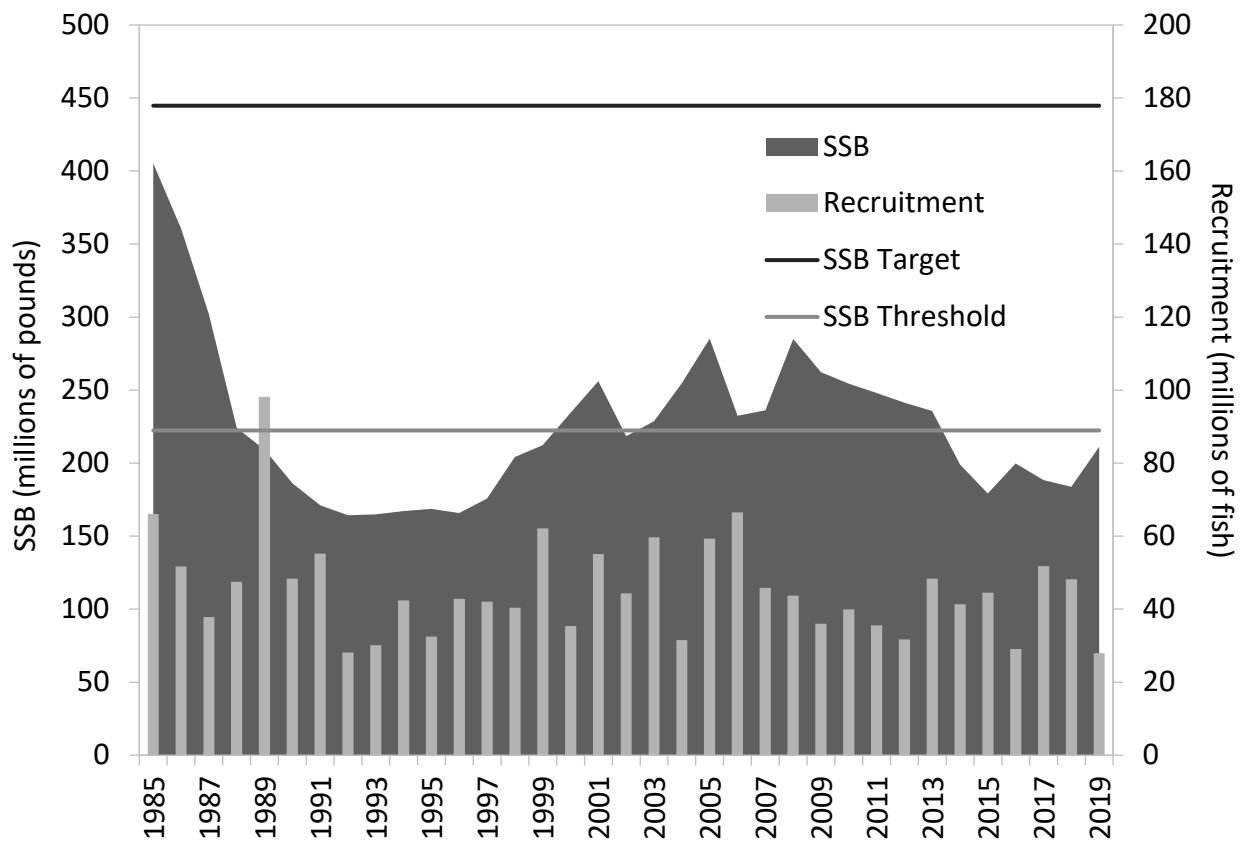


Figure 1. Bluefish spawning stock biomass and recruitment. Source: 2021 Management Track Assessment Prepublication Report, Northeast Fisheries Science Center.

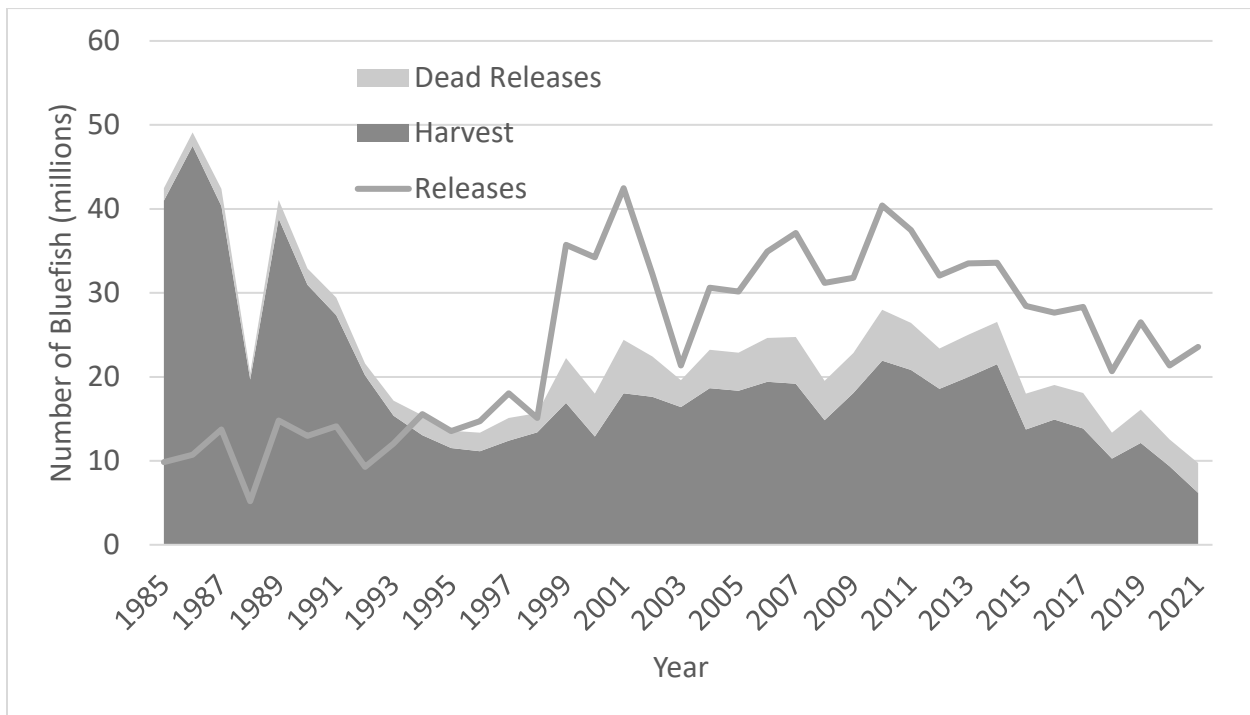


Figure 2. Estimated recreational bluefish harvest (A + B1), releases (B2) and dead releases by recreational anglers in numbers of fish, 1985-2021. Note: Harvest and dead releases are additive. Source: MRIP. Estimates may differ from source websites depending on query date (data queried June 2022).

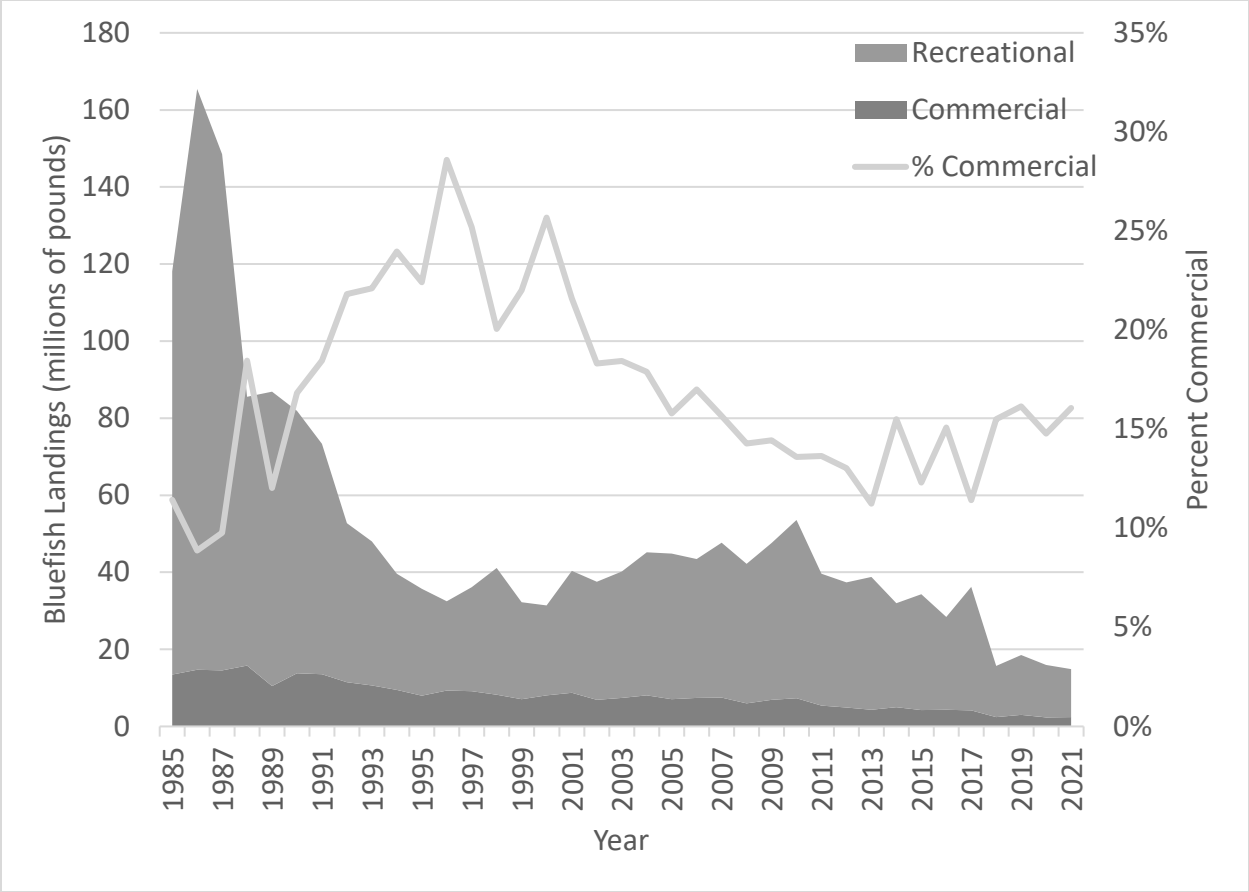


Figure 3. Bluefish recreational harvest and commercial landings by weight, 1985-2021. Source: ACCSP Data Warehouse (personal correspondence with Joseph Myers), 2022 state compliance reports, and MRIP. Estimates may differ from source websites depending on query date (Commercial data queried May 2022).